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AMERICAN DERMAPTERA OF THE MUSEUM NATIONAL D'HISTOIRE  
NATURELLE, PARIS, FRANCE.

BY MORGAN HEBARD.

The series here treated was recently forwarded for determination by Monsieur Lucien Berland, of the Paris Museum. Though including but one hundred and seven specimens, the collection has been found to have represented in it a number of little-known as well as undescribed forms, well worth reporting as a contribution to the knowledge of the American Dermaptera.

The series has been returned to the Paris Museum, with the exception of a few duplicates now in the collection of the author, deposited at The Academy of Natural Sciences of Philadelphia.

Thirty-six species are represented. Of the new species described, one is from Guatemala, three from French Guiana and one from Argentina.

PYGIDICRANIDAE.

PYGIDICRANINAE.

*Pygidicrana bivittata* Erichson.

1848. *Pygidicrana bivittata* Erichson in Schomburgk, Reisen in Brit. Guiana, III, p. 579. [British Guiana.]

St. Jean du Maroni, French Guiana, IV to V, 1914, 1 juv.

The present determination is made with some uncertainty, as the immature example before us (length, exclusive of forceps, 11.3 mm.) has the pronotum heavily suffused with blackish, being pale only in a medio-longitudinal line and along the lateral and caudal margins. The difference from the original description may be due to individual intensification of color pattern, or an undescribed species may be represented.

The head, mesonotum, metanotum and abdomen are black, except the four proximal abdominal tergites, which are buffy in a broad median section. The limbs are buffy, with the femora suffused with black ventrad on their cephalic faces. The forceps are long (3.7 mm.), straight and slender, subadjacent to their sharply incurved and acute apices, with internal margin microscopically serrulate.

## PYRAGRINAE.

**Pyragra fuscata** Serville.

1831. *Pyragra fuscata* Serville, Ann. Sci. Nat., XXII, p. 34. [French Guiana.]

St. Jean du Maroni, French Guiana, 1 ♀, 1 juv. St. Laurent du Maroni, French Guiana, 1 ♀. Nouveau Chantier, French Guiana, 1 juv.

**Pyragra brasiliensis** (Gray).

1832. *Forficula brasiliensis* Gray in Griffith, Anim. Kingd., XV, p. 184, pl. 78, fig. 2. [Brazil.]

Curityba, Parana, Brazil, 1 ♂. San Ignacio, Misiones, Argentina, 1 ♀.

**Pyragropsis paraguayensis** (Borelli).

1904. *Pyragra paraguayensis* Borelli, Boll. Mus. Zool. Anat. Comp. Univ. Torino, XIX, No. 479, p. 1. [♂, ♀; Asuncion, Luque and Villa Rica, Paraguay; Caiza and Mission of Aguairenda, Bolivia; Corumbá, Brazil.]

Villa Lutecia, San Ignacio, Misiones, Argentina, I to IV, 1910, 1 ♀, 1 juv.

## LABIDURIDAE.

## ESPHALMENINAE.

**Esphalmenus lativentris** (Philippi).

1863. *Forficula lativentris* Philippi, Zeitschr. gesam. Naturwiss., XXI, p. 217. [♂, ♀; Province of Valdivia, Chile.]

Province of Aconcagua, Chile, (José N. Thomas), 2 ♀.

## PSALINAE.

**Psalis americana** (Beauvois).

1817. *Forficula americana* Beauvois, Ins. rec. Afr. Amér., p. 165, Orth., pl. XIV, fig. 1. [San Domingo.]

Port-au-Prince, Haiti, 3 ♂, 3 ♀. Havana, Cuba, 1 ♀.

**Euborellia janeirensis** (Dohrn).

1864. *F[orcinella] janeirensis* Dohrn, Stett. Ent. Zeit., XXV, p. 285. [Rio de Janeiro, Brazil.]

Bahia, Brazil, 1 juv.<sup>1</sup>

**Euborellia minuta** (Caudell).

1907. *Anisolabis minuta* Caudell, Jour. N. Y. Ent. Soc., XV, p. 168. [♂, ♀; Arroyo and Mayaguez, Porto Rico.]

Havana, Cuba, 1 ♂, 1 ♀.

<sup>1</sup> Three females recorded by Rehn as *Anisolabis annulipes* (H. Lucas) from Independencia, Parahyba, Brazil, are found to represent individuals of the present species in the instar preceding maturity. Adults from that locality were at the same time correctly assigned by that author. (Trans. Am. Ent. Soc., XLII, p. 218, 1916.)

**Euborellia annulipes** (H. Lucas).

1847. *Forficelisa annulipes* H. Lucas, Bull. Soc. Ent. France, (2), V, p. LXXXIV. [Jardin des Plantes, Paris, France, (probably introduced).]

Montevideo, Uruguay, 2 ♀.

**Euborellia peregrina** (Mjöberg).

1904. *Anisolabis peregrina* Mjöberg, Ent. Tidsk. Stockholm, 1904, p. 131. [♀; Stockholm, Sweden, introduced from St. Anna, Matto Grosso, Brazil.]

St. Laurent du Maroni, French Guiana, XII, 1 ♀. Nouveau Chantier, French Guiana, XII, 1 ♀.

The two females at hand agree in all important features with the original description. We would note that the cephalic tibiae, in addition to being well supplied with hairs distad on all but the dorsal surface, have the distal margin ventrad armed with a very closely placed fringe of chaetiform spines; these, due to the size of this species, being more conspicuous than in specimens of the other species of *Euborellia* at hand.

Length of body (exclusive of forceps) 16.9 and 17.8; greatest width of head, 2.6 and 2.8; length of pronotum, 2.7 and 2.7; cephalic width of pronotum, 2.3 and 2.6; caudal width of pronotum, 2.7 and 3; length of forceps, laterally 3.3 and 3.7, dorsally 2.8 and 3 mm.

For the type female the total length is given as 23, the length of the forceps as 3 mm.

**Euborellia scudderi** (Bormans).

1900. *Ps[alis] scudderi* Bormans, Ann. Mus. Civ. Stor. Nat. Genova, (2), XX, p. 449. [♀; Puerto 14 de Mayo, Upper Paraguay (now in Bolivian Chaco); Olivenza, Amazon River (Brazil).]

St. Jean du Maroni, French Guiana, V, 1 ♀.

Length of body 10, length of pronotum 1.3, length of tegmen 2.2, length of exposed portion of wing 1.6, length of forceps 1.7 mm.

This specimen has fully developed tegmina and wings, but agrees so closely with material in the Philadelphia Collections which we believe to represent this species, showing a varied development of the organs of flight, that we make the present assignment feeling assured that we here have to deal with a species which develops a remarkably wide range of tegminal and wing variation.

The present specimen agrees closely with a female from Porto Velho, Rio Madera, Brazil,<sup>2</sup> except that in that specimen the tegmina and exposed portions of the wings are not as elongate. Both of these specimens have the femora more generally and not as contrastingly darkened as the specimens having short tegmina and no

<sup>2</sup> Recorded by Rehn as *Psalis* sp. Trans. Am. Ent. Soc., XLII, p. 219, (1916).

apparent wings at hand. In addition they are slightly more robust, with shorter and more truncate pronotum than the specimens recorded by Rehn from Pará, Brazil,<sup>3</sup> but agree fully in these respects with the original description, as well as with specimens from Chanchamayo, Peru, before us, which show even greater tegminal reduction than the Pará individuals.

**Labidura riparia** (Pallas).

1773. *Forficula riparia* Pallas, Reise Russischen Reichs, II, Buch 2, Anhang. p. 727. [♂; shores of Irtysh (Irtin) River, western Siberia.]

Rio de Janeiro, Brazil, 1 ♂.

**Labidura xanthopus** (Stål).

1855. *F[orficelisa] xanthopus* Stål, Ofv. Vet. Akad. Förh., XII, p. 348. [Rio de Janeiro, Brazil.]

San Ignacio, Misiones, Argentina, III and IV, 1 ♀. Tucuman, (border of Rio Chilimayo), Argentina, 2 ♀. Icaño, Santiago del Estero, Argentina, 2 ♀.

The females from the last locality alone have the wings visible and fully developed. These have the pronotum proportionately smaller and distinctly more slender than the others.

## LABIIDAE.

### SPONGIPHORINAE.

**Purex formosus** new species. (Plate XIII, figs. 1 and 2.)

This handsome species appears to be widely distinct from the other known forms of the genus, agreeing in certain features of coloration more closely with *brunneri* (Bormans), from the upper Amazon, than with the others.

The male pygidium, though more highly specialized and much more declivent, recalls the type developed in *Vostox brunneipennis* (Serville), (see plate XIII, fig. 3).

The male forceps show a much weaker curvature than is developed in several species of *Purex* and are distinctive in having a heavy median and smaller uncinat proximal tooth on the ventro-internal margin.

*Type*—♂; Gourdonville, French Guiana. October. [Paris Museum.]

Size medium, form slender. Head depressed, broadly convex surface between eyes showing two small and weak impressions,

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<sup>3</sup> As *Psalis scudderi* with a query. Trans. Am. Ent. Soc., XLII, p. 218, (1916).

sutures obsolete; very weak but distinct depressions run from the eyes toward the middle of the caudal margin of the occiput; cheeks almost as long as eyes, caudal margin of occiput very broadly and weakly concave. Antennae with first joint three times as long as distal width, enlarged in distal three-fifths; second joint very small; third joint three-fifths as long as first; fourth slightly shorter; succeeding joints increasing regularly in length and slenderness distad. Pronotum small, three-quarters as broad as head, longer than wide, lateral margins almost straight and showing an almost imperceptible divergence caudad, caudal margin rather strongly convex; surface of prozona weakly convex and showing a faint medio-longitudinal linear sulcus, other portions deplanate except narrowly toward the lateral margins where they are obliquely raised. Tegmina very wide at shoulders where their combined width is slightly less than twice the pronotal width, their length over twice that of pronotum, narrowing evenly caudad, with caudal margins weakly oblique. Wings fully developed, exposed portion nearly one-third as long as tegmen. Abdomen widening moderately to distal portion, glands of second and third tergites moderately prominent. Ultimate tergite very slightly produced between forceps, caudal margin laterad weakly concave and very weakly oblique, mesad straight, transverse. Between the base of each arm of the forceps and the transverse portion of the caudal margin, this tergite is inflated, weakly convex, being depressed about these areas externally and in the entire median area between them. Pygidium almost perpendicular, as long as wide, lateral margins straight and parallel, latero-distal margins weakly concave, oblique to the minute medio-distal portion which is produced in a minute bi-denticulate projection, the angles formed by the lateral and latero-distal margins also each produced in a slightly larger denticulation. Forceps feebly divergent in proximal fourth, thence almost straight to near the incurved apices, moderately heavy proximad, tapering gently to apices; dorsal surface deplanate to near distal portion, with delicate rounded ridge bordering the external margin; internal surface flattened, unarmed except for a small ventro-proximal uncinat tooth, with apex directed caudad, and just before the middle with a heavy and moderately large triangular ventral tooth, directed meso-ventrad. Caudal margin of penultimate sternite transverse. Caudal metatarsus with ventral surface well supplied with fine hairs, combined length of two succeeding joints about three-quarters that of metatarsus.

Length of body 8<sup>4</sup>., greatest width of head 1.25, length of pronotum .95, length of tegmen 2.1, greatest width of abdomen 1.7, length of forceps 2.8 mm.

Head blackish chestnut brown. Antennae with first two joints prouts brown, succeeding joints paler, buckthorn brown, deepening rapidly to mummy brown, which is the color of the seventh to tenth joints (remaining joints missing). Pronotum and limbs immaculate ochraceous-buff tinged with tawny. Tegmina chestnut brown, showing weakly the paler pronotal coloration at the shoulders and distad, with a small oval of the same coloration mesad, this oval half on the tegmina and half on the exposed portions of the wings and as long as the tegminal width at that point (compare *brunnei*), remaining exposed portion of wings chestnut brown. Abdomen dorsad russet tinged with cinnamon-brown distad, except laterad about the glands where it is blackish chestnut brown. Forceps russet tinged with cinnamon-brown.

The type of this graceful little insect is unique.

***Vostox punctipennis* (Stål)**

1860. *Forficula punctipennis* Stål, Kongl. Svenska Freg. Eugenie's Resa, Ins., p. 304. [♂; Rio de Janeiro, Brazil.]

Icaño, Santiago del Estero, Argentina, 1 ♂.

Stål's *punctipennis* has been placed under *V. brunneipennis* (Serville) by Burr. The specimen before us represents a species very close to *brunneipennis* but readily distinguished by a number of features. Though Stål's description of *punctipennis* does not give the most important of these, we believe that the species represented by the specimen at hand is the same, and in consequence we restore the name *punctipennis*.

Compared with material of *brunneipennis* from the United States, the present male is seen to differ in the following respects. Cheek much shorter, two-fifths instead of two-thirds as long as eye. Exposed portion of wings about half as long as tegmen, instead of distinctly less than half that length. Pygidium with marginal flange narrower, lateral points more acute and distal truncation narrower. Median and caudal femora and tibiae heavily suffused with brown mesad.

Length of body 8.3, length of pronotum 1.7, caudal width of pronotum 1.6, length of tegmen 2.9, length of exposed portion of wing 1.5, length of forceps 3.8 mm.

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<sup>4</sup>As elsewhere in this paper, the body length given does not include the length of the forceps.

**Spongovostox berlandi**<sup>5</sup> new species (Plate XIII, figure 4.)

This species bears *Vostox brunneipennis* (Serville) a general superficial resemblance. The males at hand are, however, readily distinguished by the cheeks, which are longer than the eyes; the tegmina, which are keeled; the femora, which are suffused proximad; the pygidium of generally similar form but more declivent, with disto-lateral oblique margins much more transverse and not at all emarginate, and forceps, which show a greater inward curvature distad and have the larger tooth of the internal margin proximad, not at the end of the proximal third.

*Type:* ♂; Guatemala City, Guatemala. [Paris Museum.]

Size medium for the genus, form weakly depressed. Head showing a moderate depression from eyes to median point of caudal margin, occipital lobes prominent, so that cheeks are longer than eyes and caudal margin of occiput broadly angulate emarginate, sutures obsolete. Antennae with first joint moderately large, broadening so that the distal two-thirds are the more ample; second joint minute; third nearly as long as first, but much more slender; fourth half as long as third, slightly longer than greatest width; fifth intermediate in length between third and fourth; sixth as long as third. Pronotum very slightly longer than caudal width, smooth, showing a very weak medio-longitudinal linear sulcus, lateral and caudal margins showing a very slight convexity, the former showing a very feeble convergence cephalad; prozona tumid, metazona weakly concave proximo-laterad and very feebly convex mesad, elsewhere deplanate. Tegmina smooth, with a very fine but distinct and percurrent keel along the external margin of the dorsal surface, transverse truncate caudad. Wings fully developed, exposed portion about two-fifths as long as tegmen. Abdomen with dorsal surface polished but microscopically punctulate, fourth and fifth tergites showing laterad a weak rounded carina, these tergites there slightly produced caudad. Ultimate tergite very weakly depressed meso-caudad, caudal margin almost evenly transverse. Pygidium very strongly declivent, with surface in a broad triangular dorsal area deplanate, thence convex; lateral margins fitting forceps tightly, latero-caudal margins very strongly convergent, almost transverse to a broad, weakly produced median portion which is truncate. Forceps elongate, showing a very feeble curva-

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<sup>5</sup>We take pleasure in naming this interesting species in honor of Monsieur Lucien Berland, Curator of Insects of the Muséum National d'histoire Naturelle, Paris.



ture, which is stronger toward their incurved apices, with a few irregular blunt denticulations proximad on the internal surface particularly along the ventral margin, of which that on the ventral margin opposite the apex of the pygidium is the largest. Penultimate sternite simple, its caudal margin transverse, showing a sub-obsolete concavity. Caudal metatarsus with ventral surface well supplied with hairs and with an internal fringe of lamellae, second joint very short.

Length of body<sup>6</sup> 8. and 7.8, width of head, 1.6 and 1.6, length of pronotum 1.7 and 1.7, width of abdomen 2.3 and 2.3, length of forceps 3.3 and 3.4 mm.

Coloration. Entire insect glabrous. Head and pronotum dark chestnut brown, the pronotum laterad becoming chestnut brown, mouthparts and proximal antennal joints ochraceous-tawny, the antennae thence cinnamon-brown. Tegmina chestnut brown. Exposed portions of wings warm buff, except distad and along sutural margins where they are chestnut brown. Abdomen dark chestnut brown. Forceps proximad and distad russet, becoming very dark mesad. In the paratype the russet invades the ultimate tergite. Limbs honey yellow, the femora suffused with prouts brown proximad.

In addition to the type, a paratypic male bearing the same data is before us.

***Spongovostox asemus***<sup>7</sup> new species (Plate XIII, figure 5).

This species is in many respects a smaller replica of *S. berlandi* here described. From that species it is readily distinguished by the tegmina which are not keeled, the more slender abdomen and distinctive male pygidium and forceps which latter have a heavier denticulation of the internal surface with a more conspicuous proximal tooth.

The form of the pygidium agrees closely with that figured by Burr as of *Spongovostox ghilianii* Dohrn var.<sup>8</sup>

We believe that the material examined by Burr represents one or more distinct species. Burr's characterization does not agree with the original description of *ghilianii* ("pygidium ♂ longe productum, postice rotundatim") and his type designation "Venezuela (Moritz, Typus von Dohrn)" consequently does not hold. As part at

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<sup>6</sup> The measurements of the type are given first.

<sup>7</sup> From ἄσσημος = insignificant.

<sup>8</sup> Ann. k. k. Naturhist. Hofmus. Wien. XXVI, p. 335, fig. 9, (1912).

least of the material which was before Burr may represent the present species, we feel it advisable to fix the name *ghiliani*. We do so, therefore, by selecting the type locality of *Labia ghiliani* Dohrn as Pará, Brazil. The material which Dohrn had from that locality was collected by Ghiliani and it is reasonable to suppose was that actually used in describing the species named in honor of that collector.

The heavier structure and broad head and pronotum distinguish this insect from the species *Microvostox*, in addition to its having a more deplanate head with evident sutures.

*Type:* ♂; San Ignacio, Misiones, Argentina. [Paris Museum.]

Size small for the genus, form moderately depressed. Head very weakly depressed in area bounding the very weakly defined occipital lobes, cheeks longer than eyes, caudal margin of occiput almost evenly transverse, sutures very fine but distinct. Antennae with first joint more elongate and slender than in *berlandi*, broadening so that the distal half is somewhat the more ample; second joint minute; third three-quarters as long as first, slender, cylindrical; fourth joint slightly over half as long as third, slightly longer than greatest width; fifth joint intermediate in length between third and fourth; sixth joint as long as third. Pronotum smooth, showing a very weak medio-longitudinal sulcus, length equal to width, lateral margins almost straight, parallel, caudal margin showing a very slight convexity; prozona tumid, metazona almost deplanate, showing a very feeble convexity meso-proximad. Tegmina smooth, without trace of keel, truncate caudad. Wings fully developed, exposed portion about half as long as tegmen. Abdomen as in *berlandi* except that it is more slender. Ultimate tergite rather heavily punctulate except in meso-proximal section, with a weak medio-longitudinal depression, caudal margin almost evenly transverse. Pygidium strongly declivent, dorsal surface tapering with a strong convexity to apex, which is briefly produced and truncate. Forceps much as in *berlandi* except that the denticulations of the internal surface are heavier both dorsad and ventrad, extending to distal portion, with proximal tooth median in vertical position and projecting as a small quadrate process, higher than wide, above the pygidial apex on each side. Penultimate sternite with lateral portions of caudal margin convex, these forming mesad a rounded obtuse-angulate emargination.

Length of body 7.5, width of head 1.1, length of pronotum 1, greatest width of abdomen 1.7, length of forceps 2.6 mm.

Coloration. Entire insect glabrous. Head mummy brown, mouthparts and proximal antennal joints dresden brown, the antennae deepening to prouts brown. Pronotum mummy brown shading to buffy caudad, lateral portions buffy. Tegmina mummy brown, paler toward the external margins. Exposed portions of wings broadly suffused with mummy brown along sutural margin and distad, narrowly suffused with the same color along distal portion of costal margin, remaining portions buffy. Abdomen cinnamon brown, deepening to dark chestnut brown proximo-laterad on proximal portions of tergites, the ultimate tergite entirely of this color. Pygidium and forceps dark chestnut brown, the latter paling to dresden brown in proximal portion. Limbs suffused buffy.

The type is unique.

**Microvostox parvus** (Burr)

1912. *Spongovostox parvus* Burr, Ann. k. k. Naturhist. Hofmus. Wien, XXVI, p. 336, fig. 12. [♂: Tapanokoni, Dutch Guiana (type); Georgetown, British Guiana.]

Cartago, Costa Rica, 1600 meters, (C. Picado), 1 ♂.

The present specimen agrees fully with Burr's figure and very short analysis except in size.<sup>9</sup> Length of body 5.3, length of pronotum, .6, caudal width of pronotum .7, length of tegmen 1.2, length of exposed portion of wing, .6, length of forceps 1.8 mm.

It belongs to the same species group as *bilineatus* (Scudder) and *pygmaeus* (Dohrn), differing from the genotype, *alter* (Burr), and other forms of that species group, in the more flattened head, which shows a closer approach to the type developed in the genus *Spongovostox*.

**Microvostox chopardi**<sup>10</sup> new species (Plate XIII, figures 6 and 7.)

This species is apparently closely related to Borman's *Spongiphora similis*.<sup>11</sup> Compared with the original description of the male of that species, the male before us is found to differ in the smaller size, broader pale coloration of the lateral and caudal margins of the pronotum, longer exposed portion of wings, entirely blackish limbs

<sup>9</sup> The type is given as 3.5 mm. long, the forceps 1.5 mm. It is possible that when comparison with the type of *parvus* can be made, the specimen here recorded may prove to be specifically distinct.

<sup>10</sup> We take great pleasure in naming this handsome little species in honor of our distinguished friend Monsieur Lucien Chopard, whose excellent contributions to the literature treating of Orthoptera are a constant source of pleasure to us.

<sup>11</sup> Though that species has been referred by Burr to the genus *Vostox*, we believe that examination of the type will show it to be a member of our subsequently described genus *Microvostox*.

and in the pygidium and forceps which, though of very similar general structure, show important differences. The former being merely subconical mesad in the convex area, the latter in having the internal margins entirely unarmed distad.

*Type:* ♂; Nouveau Chantier, French Guiana. August. [Paris Museum.]

Size medium, form moderately broad, for this genus which includes very small species. Head depressed and showing weak but distinct depressions which run from the eyes toward the middle of the caudal margin of the occiput, cheek one and one-half times as long as eye, caudal margin of occiput showing very broad and weak concavity, sutures obsolete. Antennae with first joint twice as long as distal width, other joints missing. Pronotum with length equal to width, very slightly broader cephalad than caudad, showing a weak medio-longitudinal sulcus and on the prozona a lateral sulcus on each side; lateral margins very broadly convex and very weakly convergent caudad, rounding broadly into the very broadly convex caudal margin. Tegmina slightly over twice as long as broad, caudal margin transverse. Wings fully developed, exposed portion nearly half as long as tegmen. Abdomen with dorsal surface polished and punctulate laterad except ultimate tergite which is smooth, shows a very feeble median depression and has its caudal margin transverse. Pygidium moderately declivent, surface convex becoming subconical mesad with a minute medio-longitudinal carina running down the caudal face of this production, lateral margins weakly convex, with a minute tubercle on each side just beyond the median point where these margins no longer touch the forceps, distal margin transverse, as broad as basal margin, with a small rounded tooth at each disto-lateral angle. Forceps straight, slightly divergent and weakly tapering in proximal half, with a few microscopic tuberculations on the internal face opposite the pygidium, inbent at end of proximal half, the distal half more slender but gently swollen meso-distad, almost straight to the slightly incurved apices and wholly unarmed. Penultimate sternite and tarsi wholly concealed by mounting slip.

Length of body 5.2, greatest width of head (across eyes) .9, length of pronotum .75, greatest width of abdomen 1.5, length of forceps 1.3 mm.

Head dull black, proximal antennal joints dresden brown. Pronotum shining blackish brown, broadly margined laterad and caudad with translucent whitish. Tegmina shining blackish brown, show-

ing a longitudinal buffy tinge on the shoulders. Exposed portion of wings shining, blackish brown toward sutural margin, remaining half warm buff. Dorsal surface of abdomen shining blackish, showing a rich chestnut tinge mesad. Forceps shining blackish brown with a rich chestnut tinge. Limbs shining blackish brown.

The type of this remarkable species is unique.

**Microvostox ghilianii** Dohrn.

1864. *L[abia] ghilianii* Dohrn, Stett. Ent. Zeit., XXV, p. 424. [♂, ♀: Para,<sup>12</sup> (Brazil); Cayenne, (French Guiana); Venezuela.]

Charvien, lower Maroni River, French Guiana, V, 1 ♂.

From examination of this specimen, which appears to agree fully with the description of *ghilianii*, we find *M. schwarzi* (Caudell) to be a very closely related species, differing only in its decidedly broader form. As a result the pronotum of the present species is distinctly smaller in proportion to its body length, while the tegminal width is contained in the tegminal length three times. In males of *schwarzi* the tegminal width is contained in the tegminal length about two and one-half times. The male genitalia in these species show no diagnostic differences whatever.

These species, as well as the genotype, *M. alter* (Burr), belong to a species group having the head more strongly and evenly convex, strongly suggesting the type usually encountered in the genus *Labia*.

LABIINAE.

**Labia arcuata** Scudder.

1876. *Labia arcuata* Scudder, Proc. Bost. Soc. Nat. Hist., XVIII, p. 257. [♂; Vassouras, one hundred miles north of Rio de Janeiro, Brazil.]

St. Jean du Maroni, French Guiana, III, 1 ♂. St. Laurent du Maroni, French Guiana, XII, 1 ♂, 1 ♀.

**Labia dorsalis** (Burmeister)

1838. *F[orficula] dorsalis* Burmeister, Handb. Ent., II, abth. II, pt. I, p. 754. [Colombia.]

Guadeloupe, West Indies, 1 ♂. St. Jean du Maroni, French Guiana, V, 2 ♂, 2 ♀. St. Laurent du Maroni, French Guiana, I and XII, 2 ♂, 2 ♀.

**Prolabia unidentata** (Beauvois)

1805. *Forficula unidentata* Beauvois, Ins. Recueil. Afr. Amér., p. 165, pl. XIV, fig. 3. [San Domingo.]

Port au Prince, Haiti, 1 ♂. San Jaun, Porto Rico, 1 ♀.

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<sup>12</sup> Selected as the type locality on page 345, under the discussion of *Spongovostox asemus* new species. It would appear very probable, from the literature and Burr's figure, that the material recorded by Dohrn represented more than one species.

## SPARATTINAE.

**Sparatta semirufa** Kirby (Plate XIII, figure 8.)

1896. *Sparatta semirufa* Kirby, Jn. Linn. Soc. London, Zool., XXV, p. 528, pl. XX, figs. 4 and 4a. [[♂]; Igaurassu, near Pernambuco, Brazil.]

French Guiana, 1 ♂. St. Jean du Maroni, French Guiana, 1 ♀. St. Laurent du Maroni, French Guiana, 1 ♀.

These specimens agree closely and are clearly conspecific with the specimen from Pará, Brazil, referred tentatively to *semirufa* by Rehn. Kirby's descriptions of species of this genus are thoroughly unsatisfactory as to sex<sup>13</sup> and details of genitalia, hence determinations can not be made with full satisfaction until the material from which that author described *semirufa* has been studied. Kirby's figures agree fully with the females before us, the genitalia of the male at hand are here figured.

All of the specimens we have seen are apparently paler than Kirby's material. In these the pronotum, limbs, proximal portion of tegmina and proximal portion of abdomen are immaculate ochraceous buff, the head and antennae tinged with rosy.

**Parasparatta guyanensis** new species (Plate XIII, figures 9 and 18).

This species is related to the Mexican *P. dentifera* (Rehn) and the Brazilian and Paraguayan *P. nigrina* (Stål).<sup>14</sup> With the former it agrees in abdominal coloration and form of male pygidium, with the latter in antennal and limb coloration.

The male forceps bear two teeth on each branch, as do those of *nigrina*, but the position of these teeth is not the same, being more nearly that of the two more distal teeth in *dentifera*.

In the female, unlike in females of *dentifera*, the pygidium has the ventral lamellate area completely visible from above, while the forceps lack a proximo-internal lamellation.

*Type:* ♂; St. Jean du Maroni, French Guiana. April and May. [Paris Museum.]

Size and form as in *dentifera*. Head greatly depressed, conventional heart-shaped, the caudal margin rather strongly concave; eyes very small, sutures obsolete. Antennae with first joint nearly four times as long as broad; second joint minute; third joint slightly

<sup>13</sup> Either Kirby mistook a female for a male when describing *semirufa*, or the material before us represents a distinct species. We do not believe the latter to be true.

<sup>14</sup> See Borelli's excellent comparison of these species in Boll. Mus. Zool. Anat. comp. Univ. Torino, XXX, No. 699, p. 3, (1915). Also discussion by Hebard, Trans. Am. Ent. Soc., XLIII, p. 420, (1917).

over half as long as first; joints immediately succeeding increasing strongly in length distad. Pronotum as typical of genus, flattened, longer than broad, briefly produced cephalad to form a collar which is delimited by a delicate transverse sulcus, this produced area not as long as in *Sparatta*, with lateral margins very feebly convex and nearly parallel and caudal margin moderately convex. Tegmina and wings fully developed, thickly supplied with minute hairs. Dorsal surface of abdomen similarly hairy, except ultimate tergite which is smooth dorsad and has a U-shaped impressed line. Pygidium as in *dentifera*, a produced shaft, three times as long as basal width, with dorsal surface convex, the lateral margins weakly convex, so that it is narrowest meso-proximad, the disto-lateral angles produced in acute points, the distal portion between these produced caudad in a square median lamella. Forceps hairy, with shaft almost straight to distal third where it curves evenly and rather weakly inward to the flattened acute apex; internal surface concave in slightly over proximal two-fifths, the ventral margin there supplied with minute and irregular denticulations terminated by a large tooth directed meso-caudad, armed at end of proximal four-fifths with another similar tooth which, however, is dorsal in vertical position and is directed mesad. Penultimate ventral sternite with caudal margin weakly bilobate. Caudal metatarsus as long as third tarsal joint, supplied ventrad with an external row of widely spaced minute spines and an internal very close fringe of spinuliform hairs.

*Allotype*: ♀; same data as type. [Paris Museum.]

Agrees closely with male except in the following features. Ultimate abdominal tergite longer, its median length equal to its caudal width. Pygidium small, with dorsal surface convex and very strongly declivent, the distal (caudal) portion produced in a lamella shorter than wide, the lateral margins of this lamella straight and divergent in brief proximal portion, thence concave and showing no divergence to the apices, caudal margin straight mesad, convex to the acute apices laterad; these margins resultantly forming a minute proximal denticulation on each side and two large, slightly recurved horns at the disto-lateral extremities.

Head (except mouthparts), pronotum, tegmina, exposed portions of wings and dorsal surface of abdomen (except ultimate tergite) blackish, shining, showing a very slight brown tinge. Mouthparts dresden brown. Antennae entirely blackish brown. Ultimate tergite of abdomen tawny (ochraceous-tawny in recessive specimens), shining, the dorsal surface of the abdomen having, in some

specimens, the preceding distal tergites tinged with tawny distad as well. Pygidium and forceps mars brown. In one recessive example with pygidium light ochraceous-tawny and forceps mars brown, in another with pygidium and forceps ochraceous-tawny. Limbs in intensive specimens blackish mummy brown, paling slightly to prouts brown distad. In the majority of examples the femora and tibiae are mummy brown paling to dresden brown distad, the tarsi dresden brown.

*Measurements (in millimeters)*

		Length of body	Length of pronotum	Width of pronotum	Length of tegmen	Length of forceps
♂						
St. Jean du Maroni.	Type..	8.	1.2	.9	1.8	2.9
Charvien.	Paratype.....	7.8	1.25	.9	1.8	3.
Nouveau Chantier.	Para-					
type.....	type.....	7.9	1.25	.9	1.8	3.2
♀						
St. Jean du Maroni.	Allo-					
type.....	type.....	8.1	1.2	.95	1.8	2.7
Charvien.	Paratype.....	8.3	1.3	1.	1.8	2.8
Nouveau Chantier.	Para-					
type.....	type.....	7.2	1.2	.9	1.8	2.9

Coloration is apparently of considerable specific diagnostic value in this and allied species, but can not safely be used without full consideration of the structural details, a frequent fault in past literature.

In addition to the described pair, we have before us eight paratypes from French Guiana. Of these one pair are from Nouveau Chantier, taken in May; one pair from Charvien, taken in October and November, the other four females without additional data.

***Parasparatta dentifera* (Rehn)**

1901. *Sparatta dentifera* Rehn, Trans. Am. Ent. Soc., XXVII, p. 218. [♀; Orizaba, Vera Cruz, Mexico.]

Guatemala City, Guatemala, 2 ♀.

One of these specimens is smaller than the other, with specialization of the forceps less decided. Such variation is frequently encountered in this and allied species.

**FORFICULIDAE.**

**FORFICULINAE.**

***Skalistes lugubris* (Dohrn)**

1862. *Forficula lugubris* Dohrn, Stett. Ent. Zeit., XXIII, p. 230. [Cordoba, (Vera Cruz) Mexico.]

Sierra de Tlalpujahua, near Toluca, Mexico, Mexico, 2400 to 2700 meters, 1 ♂, 1 juv. Vicinity of Guadalajara, Jalisco, Mexico, XI, 1 ♀.



**Skalistes inopinata** (Burr)

1900. *Ancistrogaster inopinata* Burr, Ann. Mag. Nat. Hist., (7), VI, p. 85. [♂, ♀; Costa Rica.]

Antigua, Department of Sacatepequez, Guatemala, 1400 meters, 1 ♂, 1 ♀.

The length of the forceps in the present male is 3.7 mm.

Though *inopinata* has been referred by Burr to synonymy under *S. lugubris* (Dohrn), we believe it to be a very distinct species. We have not as yet seen Mexican material referable to *S. cornuta* (Burr), which name may prove a synonym of *inopinata*.

**Doru lineare** (Eschscholtz)

1822. *Forficula linearis* Escholtz, Entomogr., p. 81. [Santa Catharina, Brazil.]

Huejotitlan, Jalisco, Mexico, 1700 meters, VI, VII and XI, 3 ♂, 1 ♀. Guatemala City, Guatemala, 2 ♂, 2 ♀. Curityba, Parana, Brazil, 2 ♀. Gran Chaco, Argentina, 2 ♀. Villa Lutecia, near San Ignacio, Misiones, Argentina, I to IV, 2 ♂, 5 ♀. Icaño, Santiago del Estero, Argentina, XII, 5 ♂, 6 ♀.

Two of the females from Villa Lutecia lack apparent wings. These specimens have the pronotum slightly larger, but in other respects agree perfectly with the other females of the series.

## NEOLOBOPHORINAE.

**Neolobophora ruficeps** (Burmeister)

1838. *F[orficula] ruficeps* Burmeister, Handb. Ent., II, abth. II, pt. I, p. 755. [Mexico.]

Antigua, Department of Sacatepequez, Guatemala, 1400 meters, 1 ♀.

This specimen has the tegmina impresso-punctate.<sup>15</sup>

## OPISTHOCOSMIINAE.

**Neocosmiella atrata** Hebard.

1919. *Neocosmiella atrata* Hebard, Trans. Am. Ent. Soc., XLV, p. 96, pl. XVI, fig. 4. [♂: Pamplona, Santander, Colombia.]

Pamplona, Santander, Colombia, 1 ♂.

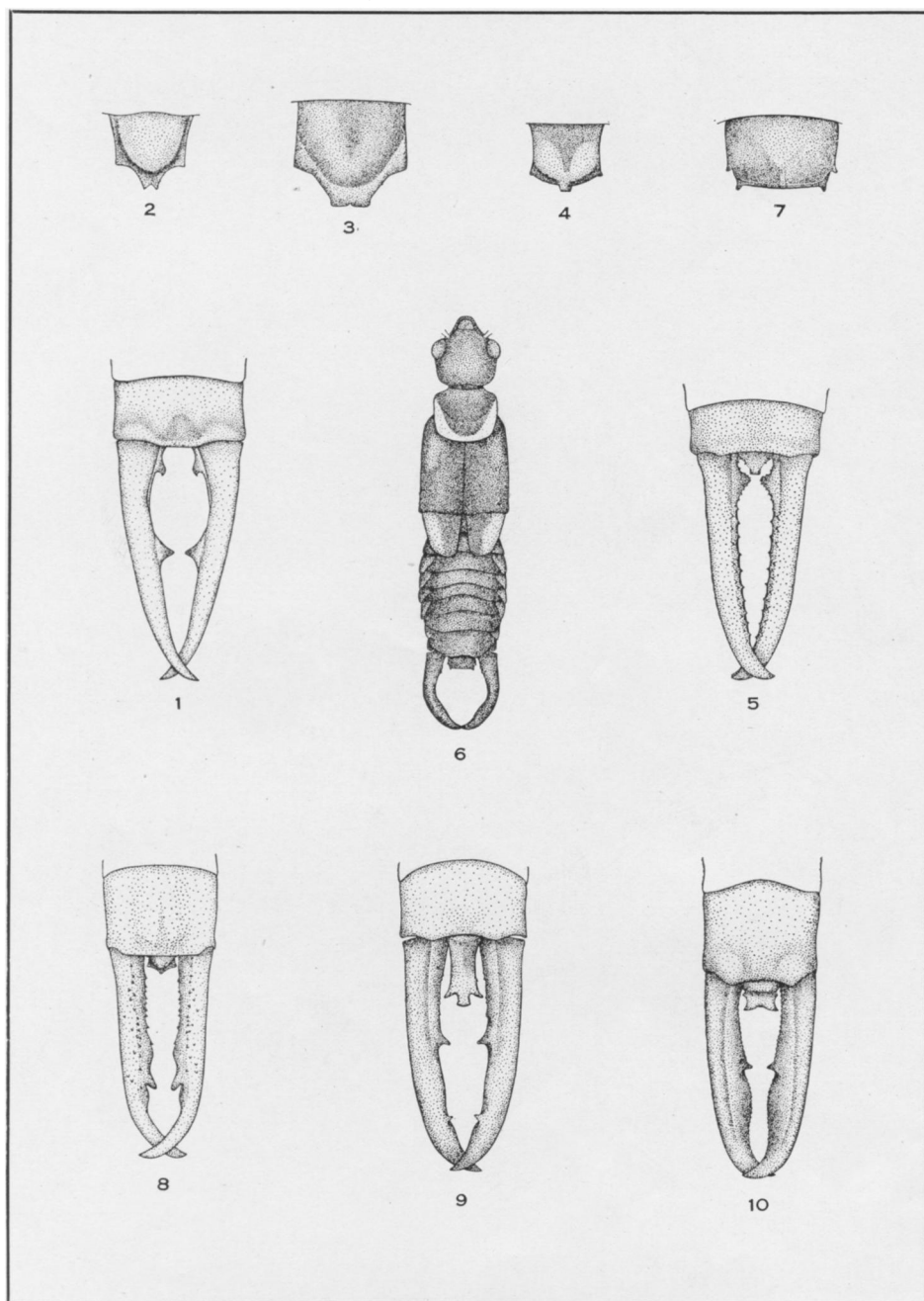
The specimen here recorded agrees fully with the type of this interesting species.

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<sup>15</sup> See discussion by Hebard, Trans. Am. Ent. Soc., XLIII, p. 424, (1917).

## EXPLANATION TO PLATE XIII.

- Fig. 1.—*Purex formosus* new species. ♂, *type*. Gourdonville, French Guiana. Dorsal view of ultimate tergite, pygidium and forceps. ( $\times 7\frac{1}{2}$ ).
- Fig. 2.—*Purex formosus* new species. ♂, *type*. Gourdonville, French Guiana. Dorsal view of pygidium. (Greatly enlarged.)
- Fig. 3.—*Vostox brunneipennis* (Serville). ♂. Arcadia, Louisiana. Dorsal view of pygidium. (Greatly enlarged.) (For comparison with figures 2 and 4.)
- Fig. 4.—*Spongovostox berlandi* new species. ♂, *type*. Guatemala City, Guatemala. Dorsal view of pygidium. (Greatly enlarged.)
- Fig. 5.—*Spongovostox asemus* new species. ♂, *type*. San Ignacio, Misiones, Argentina. Dorsal view of ultimate tergite, pygidium and forceps. ( $\times 12\frac{1}{2}$ ).
- Fig. 6.—*Microvostox chopardi* new species. ♂, *type*. Nouveau Chantier, French Guiana. Dorsal view. ( $\times 8\frac{1}{2}$ ).
- Fig. 7.—*Microvostox chopardi* new species. ♂, *type*. Nouveau Chantier, French Guiana. Dorsal view of pygidium. (Greatly enlarged.)
- Fig. 8.—*Sparatta semirufa* Kirby. ♂. St. Jean du Maroni, French Guiana. Dorsal view of ultimate tergite, pygidium and forceps. ( $\times 7\frac{1}{2}$ ).
- Fig. 9.—*Parasparatta guyanensis* new species. ♂, *type*. St. Jean du Maroni, French Guiana. Dorsal view of ultimate tergite, pygidium and forceps. ( $\times 10\frac{1}{2}$ ).
- Fig. 10.—*Parasparatta guyanensis* new species. ♀, *allotype*. St. Jean du Maroni, French Guiana. Dorsal view of ultimate tergite, pygidium and forceps. ( $\times 10\frac{1}{2}$ ).



HEBARD: AMERICAN DERMAPTERA.